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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,023	09/22/2006	Masafumi Ueno	1907-0238PUS1	7339
2292 7590 05/13/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER LEE, GENE W	
			ART UNIT 2629	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/594,023	<b>Applicant(s)</b> UENO ET AL.	
	<b>Examiner</b> Gene W. Lee	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) 1-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 33-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/22/2006;12/06/2006;08/06/2008</u>                          | 6) <input type="checkbox"/> Other: _____                          |



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 33-58 are rejected** under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claim 33, the limitation "certain vertical direction" is vague because the claim does not define a direction that is vertical, or alternatively a direction that is horizontal. Furthermore, the geometric plane these directions take place in is not specified. Claims 34-40 depend from claim 33 and suffer from the same defect.

4. Regarding claims 41, 43, 45, 47, 49, 51, 53, 55, and 57, the limitation  $\Delta E = 6.5$  is insufficiently defined. There are no units of measurement provided, or any other description sufficient to give this limitation a precise meaning. The claims that depend from these claims also suffer from the same defect.

5. Regarding claims 42, 44, 46, 48, 50, 52, 54, 56, and 58, the limitations "with the use of the display signals" or "with the use of a display signal" contradicts the earlier limitation "regardless of display signals" found in the independent claims from which they depend, namely claims 41, 47, and 53.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2629

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 41-58 are rejected** under 35 U.S.C. 102(b) as being anticipated by U.S.

Patent No. 5,798,740 (Bitzakidis et al.).

8. Regarding claim 41, Bitzakidis teaches a liquid crystal display apparatus that uses an active matrix type liquid crystal panel with a plurality of picture element electrodes formed in a matrix shape to display color images by applying voltages to the picture element electrodes and by retaining this electric charge for one frame period (Abstract), the apparatus comprising a correcting portion that corrects a display signal input to each picture element electrode, the correcting portion correcting the display signal to be input to the picture element electrode such that the display luminance of the picture element has a color difference  $\Delta E \leq 6.5$  or less relative to the display luminance that should actually be displayed, regardless of display signals input to picture element electrodes of the entire screen (Abstract; Claim 1).

9. Regarding claim 42, Bitzakidis teaches the liquid crystal display apparatus as defined in claim 41, wherein the correcting portion generates a correction signal for the display signal to be input to the picture element electrode with the use of the display signals to be input to the picture element electrodes arranged along each source line and the display signal to be input to the picture element electrode (Abstract; Claim 1).

Art Unit: 2629

10. Regarding claim 43, Bitzakidis teaches the liquid crystal display apparatus as defined in claim 41, wherein the correcting portion corrects the display signal to be input to the picture element electrode during a period after the display signal is input to the picture element electrode such that the display luminance of the picture element has a color difference  $AE=6.5$  or less relative to the display luminance that should actually be displayed, regardless of a display signal input to a picture element electrode other than the picture element electrode (Abstract; Claim 1).

11. Regarding claim 44, Bitzakidis teaches the liquid crystal display apparatus as defined in claim 42, wherein the correcting portion generates the correction signal for the display signal to be input to the picture element electrode during a period after the timing when the display signal should be input to the picture element electrode with the use of a display signal to be input to a picture element electrode other than the picture element electrode and the display signal to be input to the picture element electrode (Abstract; Claim 1).

12. Regarding claim 45, Bitzakidis teaches the liquid crystal display apparatus as defined in claim 41, wherein the correcting portion corrects the display signal to be input to the picture element electrode during a period before the display signal is input to the picture element electrode such that the display luminance of the picture element has a color difference  $AE=6.5$  or less relative to the display luminance that should actually be displayed, regardless of a display signal input to a picture element electrode other than the picture element electrode (Abstract; Claim 1).

Art Unit: 2629

13. Regarding claim 46, Bitzakidis teaches the liquid crystal display apparatus as defined in claim 42, wherein the correcting portion generates the correction signal for the display signal to be input to the picture element electrode during a period before the timing when the display signal should be input to the picture element electrode with the use of a display signal input to a picture element electrode other than the picture element electrode and the display signal to be input to the picture element electrode (Abstract; Claim 1).

14. Regarding claim 47, Bitzakidis teaches a crosstalk elimination circuit of a liquid crystal display apparatus that uses an active matrix type liquid crystal panel with a plurality of picture element electrodes formed in a matrix shape to display color images by applying voltages to the picture element electrodes and by retaining this electric charge for one frame period, the apparatus comprising a correcting portion that corrects a display signal input to each picture element electrode, the correcting portion correcting the display signal to be input to the picture element electrode such that the display luminance of the picture element has a color difference  $\Delta E=6.5$  or less relative to the display luminance that should actually be displayed, regardless of display signals input to picture element electrodes of the entire screen (Abstract; Claim 1).

15. Regarding claim 48, Bitzakidis teaches the crosstalk elimination circuit as defined in claim 47, wherein the correcting portion generates a correction signal for the display signal to be input to the picture element electrode with the use of the display signals to be input to the picture element electrodes arranged along each source line and the display signal to be input to the picture element electrode (Abstract; Claim 1).

Art Unit: 2629

16. Regarding claim 49, Bitzakidis teaches the crosstalk elimination circuit as defined in claim 47, wherein the correcting portion corrects the display signal to be input to the picture element electrode during a period after the display signal is input to the picture element electrode such that the display luminance of the picture element has a color difference  $AE=6.5$  or less relative to the display luminance that should actually be displayed, regardless of a display signal input to a picture element electrode other than the picture element electrode (Abstract; Claim 1).

17. Regarding claim 50, Bitzakidis teaches the crosstalk elimination circuit as defined in claim 48, wherein the correcting portion generates the correction signal for the display signal to be input to the picture element electrode during a period after the timing when the display signal should be input to the picture element electrode with the use of a display signal to be input to a picture element electrode other than the picture element electrode and the display signal to be input to the picture element electrode (Abstract; Claim 1).

18. Regarding claim 51, Bitzakidis teaches the crosstalk elimination circuit as defined in claim 47, wherein the correcting portion corrects the display signal to be input to the picture element electrode during a period before the display signal is input to the picture element electrode such that the display luminance of the picture element has a color difference  $AE=6.5$  or less relative to the display luminance that should actually be displayed, regardless of a display signal input to a picture element electrode other than the picture element electrode (Abstract; Claim 1).



Art Unit: 2629

19. Regarding claim 52, Bitzakidis teaches the crosstalk elimination circuit as defined in claim 48, wherein the correcting portion generates the correction signal for the display signal to be input to the picture element electrode during a period before the timing when the display signal should be input to the picture element electrode with the use of a display signal input to a picture element electrode other than the picture element electrode and the display signal to be input to the picture element electrode (Abstract; Claim 1).

20. Regarding claim 53, Bitzakidis teaches a display control method of a liquid crystal display apparatus that uses an active matrix type liquid crystal panel with a plurality of picture element electrodes formed in a matrix shape to display color images by applying voltages to the picture element electrodes and by retaining this electric charge for one frame period, the method including a correcting step of correcting a display signal input to each picture element electrode, at the correcting step, the display signal to be input to the picture element electrode being corrected such that the display luminance of the picture element has a color difference  $\Delta E=6.5$  or less relative to the display luminance that should actually be displayed, regardless of display signals input to picture element electrodes of the entire screen (Abstract; Claim 1).

21. Regarding claim 54, Bitzakidis teaches the display control method as defined in claim 53, wherein at the correcting step, a correction signal for the display signal to be input to the picture element electrode is generated with the use of the display signals to be input to the picture element electrodes arranged along each source line and the display signal to be input to the picture element electrode (Abstract; Claim 1).

Art Unit: 2629

22. Regarding claim 55, Bitzakidis teaches the display control method as defined in claim 53, wherein at the correcting step, the display signal to be input to the picture element electrode is corrected during a period after the display signal is input to the picture element electrode such that the display luminance of the picture element has a color difference  $AE=6.5$  or less relative to the display luminance that should actually be displayed, regardless of a display signal input to a picture element electrode other than the picture element electrode (Abstract; Claim 1).

23. Regarding claim 56, Bitzakidis teaches the display control method as defined in claim 54, wherein at the correcting step, the correction signal for the display signal to be input to the picture element electrode is generated during a period after the timing when the display signal should be input to the picture element electrode with the use of a display signal to be input to a picture element electrode other than the picture element electrode and the display signal to be input to the picture element electrode (Abstract; Claim 1).

24. Regarding claim 57, Bitzakidis teaches the display control method as defined in claim 53, wherein at the correcting step, the display signal to be input to the picture element electrode is corrected during a period before the display signal is input to the picture element electrode such that the display luminance of the picture element has a color difference  $AE=6.5$  or less relative to the display luminance that should actually be displayed, regardless of a display signal input to a picture element electrode other than the picture element electrode (Abstract; Claim 1).

Art Unit: 2629

25. Regarding claim 58, Bitzakidis teaches the display control method as defined in claim 54, wherein at the correcting step, the correction signal for the display signal to be input to the picture element electrode is generated during a period before the timing when the display signal should be input to the picture element electrode with the use of a display signal input to a picture element electrode other than the picture element electrode and the display signal to be input to the picture element electrode (Abstract; Claim 1).

26. **Claims 33-36, 38-40 are rejected** under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2005/0275668 (Feng).

27. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

28. Regarding claim 33, Feng teaches a crosstalk elimination circuit that corrects a display signal input to each of a plurality of picture element electrodes provided in a liquid crystal panel to eliminate crosstalk of a liquid crystal display apparatus using the liquid crystal panel ([1]-[2]), the circuit comprising an LUT that inputs a display signal of a correction target picture element and a display signal of an adjacent picture element adjacent to a source line of the correction target picture element in a certain vertical direction, the LUT outputting a correction signal for correcting the display signal of the correction target picture element ([19]), and an adjacent picture element correction LUT for correcting the display signal of the adjacent picture element adjacent to the correction target picture element, wherein the adjacent picture element correction LUT

Art Unit: 2629

uses a display signal of a next adjacent picture element adjacent to a source line of the adjacent picture element in a certain vertical direction and the display signal of the adjacent picture element to extract correction value data of the adjacent picture element, which are output as an adjacent picture element correction signal, and wherein the LUT for correcting the correction target picture element inputs the display signal of the adjacent picture element corrected with the use of the signal output from the adjacent picture element correction LUT and the display signal of the correction target picture element to extract the correction data of the correction target picture element ([19]).

29. Regarding claim 34, Feng teaches the crosstalk elimination circuit as defined in claim 33, wherein signal level intervals for setting the correction value data in the adjacent picture element correction LUT are established more roughly than the signal level intervals for setting the correction value data in the LUT for correcting the correction target picture element ([18]-[19]).

30. Regarding claim 35, Feng teaches the crosstalk elimination circuit as defined in claim 33, wherein signal level intervals for setting correction value data in the LUT are established roughly by a predetermined level width relative to a level width that may be achieved by the signal level of the display signal input to each picture element electrode ([18]-[19]).

31. Regarding claim 36, Feng teaches the crosstalk elimination circuit as defined in claim 35, wherein when extracting from the LUT the correction value data corresponding to the signal level between the signal levels with the correction value

data set, the target correction value data are extracted by performing linear interpolation between the signal levels ([39]).

32. Regarding claim 38, Feng teaches the crosstalk elimination circuit as defined in claim 35, wherein the signal level intervals for setting the correction value data in the LUT are established with finer intervals of the signal levels of the correction target picture element as compared to the signal levels of the adjacent picture element ([39]).

33. Regarding claim 39, Feng teaches the crosstalk elimination circuit as defined in claim 33, wherein the LUT is disposed for each primary color of RGB to enable individual setup of the correction value of the LUT for each color ([16]-[19]; Fig. 4).

34. Regarding claim 40, Feng teaches a liquid crystal display apparatus provided with the crosstalk elimination circuit as defined in claim 33 ([2], [18]-[19]; Figs. 1, 3).

### ***Conclusion***

35. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,320,562 (Ueno et al.) teaches a device and method for reducing cross-talk.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gene W. Lee whose telephone number is 571-270-7148. The examiner can normally be reached on Monday-Friday, 9:30am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GWL/

/Amare Mengistu/

Supervisory Patent Examiner, Art Unit 2629